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SEAT No. :

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T.Y.B.Sc.

BIOTECHNOLOGY

Bb-333: Biodiversity & Systematics

(2013 Pattern) (Semester - III)

Time : 3 Hours]

[Max. Marks :80

Instructions to the candidates:

- 1) *All Questions are compulsory.*
- 2) *Figures to the right indicate full marks.*
- 3) *Draw neat & labelled diagrams wherever necessary.*

Q1) Answer in 2-3 lines:

[10×2=20]

- a) Define with example species diversity.
- b) What is meant by species richness?
- c) Enlist importances of biodiversity databases with example.
- d) Compare and contrast proto-cooperation & commensalism.
- e) Define Niche with appropriate example.
- f) What is Red data book?
- g) Define sympatric speciation.
- h) What is serotyping?
- i) Define Altruism with example.
- j) Define Entrainment.

Q2) Write notes on (any three):

[3×5=15]

- a) Shannon's index for biodiversity analysis.
- b) Cold desert biome.
- c) Growth forms of population.
- d) Competition model.

P.T.O.

Q3) Write in brief (any three): **[3×5=15]**

- a) Animal mating behaviour.
- b) Earth summit.
- c) Livestock diversity of India.
- d) Change in biodiversity over space and time.

Q4) a) Justify: Insitu conservation is always preferred over exsitu conservation. Add a note on techniques used for Insitu conservation. **[8]**

- b) Explain the importance of traditional knowledge in conservation of biodiversity. **[7]**

OR

a) Explain the need for classification. Add note on molecular techniques used for classification. **[8]**

- b) Illustrate interspecific interactions of organisms. **[7]**

Q5) Write notes on (any three): **[3×5=15]**

- a) Circadian Rhythm.
- b) Chemotaxonomy
- c) β -diversity.
- d) Biodiversity hotspots in Asia.

